

## FIBER-BASED OPTICAL LOW COHERENCE TOMOGRAPHY

## ABSTRACT

Generally, and in one form of the present invention, is a polarization-maintaining fiber-based polarization sensitive optical low coherence reflectometer for depth resolved birefringence measurement. With the present invention, linear birefringence of a sample may be measured from data recorded in a single A-Scan. In addition, the present invention provides for the  
5 simultaneous measurement of retardation and orientation of birefringent axes, wherein measured retardation is insensitive to sample rotation in the plane perpendicular to ranging.